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CONSIDERATIONS ON
ANTERIOR UTERINE DISPLACEMENTS AND
A NEW METHOD OF TREATMENT
FOR THE SAME.

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In the consideration of displacements of the uterus it is necessary to understand the term "normal position." I think I cannot do better than quote the view of Richer, "Traité clinique Martineau" :

1. In the fœtus, the newborn, and the child, up to ten or twelve years of age, the uterus has neither a fixed nor a determined direction or position ; it is elongated, soft, flexible, not situated in the pelvis, but in the abdomen, unprovided with true ligaments, and is easily moved by any force whatever.

2. In adult women the uterus lies though it is lightly enough fastened by its very incomplete ligaments, subject to frequent displacements backward, forward, and to the sides, mostly in one direction, which may be called *normal* ; this is more or less regularly flexed forward, its axis seeming to follow the direction of the pelvic canal. Therefore, as the pelvis describes an arc, with its concavity forward, the axis of the uterine cavity is inclined the same way.

Schultz and Fritsch have enabled us to discard those abominable representations of *pelvic sections*, still scattered through most of our gynecological and obstetric works, and which are totally inadequate to render a correct representation of what may be called the *normal position*, and they have shown that dissections of dead or frozen bodies are by no means to be relied upon to give us the absolute position occupied by the uterus

during life. Hach (Dissert., Dorpat, 1877,) also has demonstrated that in two cases, where a displacement of the uterus was diagnosed twenty-four hours before death, *the exact counterpart appeared in the autopsy.* The abdominal and the blood pressure, two factors in keeping the uterus in position, discontinue after death, and consequently the representations obtained by the use of frozen bodies, etc., are frequently incorrect.

The uterus is sustained, more or less, by the so-called ligaments, the vagina, and perineum below, and the excessive quantity of erectile tissue and blood-vessels surrounding it, the vagina, and ovaries.

The round ligaments come into play as supports only when the uterus is in retroversion ; shortened by disease they form a grave factor for displacement.

Professor Pallen, however, has for many years denied these functions of the round ligaments, and claims that they are but the analogues of the cremaster in the male, functioning only during erotic excitement, and then for the purpose of dragging the uterine body toward the pelvic arch.

The broad ligaments, though admitting of a good deal of mobility of the fundus, before being stretched by pregnancy, contribute much to keep the organ from lateral displacement.

Posteriorly the utero-sacral (utero-lumbar) ligaments, made up of the folds of peritoneum forming Douglas' cul-de-sac, strengthened by strong bundles of the pelvic fascia, and musculo-cellular prolongations from the vagina, and from the *cortex uteri* itself (Luschka's muscle), are, after embracing the rectum, inserted into the lower lumbar vertebrae. These are the ligaments, *par excellence*, a shortening or relaxing of which will produce various displacements. Continuing forward from the cervico-corporeal junction, they embrace the bladder, and are inserted in the pubes. Besides, about two centimetres of the cervix are attached to the bladder by cellular tissue.

The firmness with which the base of this organ is fixed (by ureters, cellular tissue, etc.), and its intimate connection with the vagina and uterus, make the vesico-vaginal septum a strong factor in the circle of uterine support, especially when it is considered that prolapse without cystocele is rare or almost impossible.

This line of support, extending from the subpubic ligament to the attachment of the sacro-uterine ligament above, forms what is described by Savage as the *pelvic roof*. It is this pelvic roof which, intersecting the uterus at its cervo-corporeal junction, allows of a free tilting mobility forward and backward, but not so much upward or downward. However, the cervix is, without doubt (Savage notwithstanding) prevented from sinking downward and backward by the posterior wall of the vagina. This, again, derives its support from the prolongations of the vaginal tube to the pelvic fascia, from its own inherent rigidity, and last, but not least, from the perineum. It is obvious, then, that it is not the perineum directly, which gives support to the uterus, but indirectly, in so far as it supports the posterior vaginal wall ; besides which, the posterior wall,

being rather below than behind the anterior wall, also supports the latter, and with it furnishes additional safety against cystocele.

The abdominal pressure materially influences the organ. The various plexuses of erectile tissue surrounding, as they do, vagina and uterus, and being filled in life with an amount of blood sufficient to give them a certain stability, will do much to restrain the apparently superabundant mobility of the uterus (Pallen).

Normal variations in its position occur every day; the filling of the bladder lifts the fundus, and throws it backward; an abnormally distended rectum throws the organ *in toto* forward (and only exceptionally the fundus). The act of respiration draws the organ up, or depresses it, any exertion or compression of the abdominal muscles depresses the uterus; besides, congenital malformations, such as short vagina, or one short vaginal wall, an abnormally short ligament, may, in a given case, though deviating from the more frequently found position, represent the normal one here. It is only in those malpositions where free mobility is impeded, where the ligaments are shortened or relaxed by disease, where the blood-vessels are stretched or impinged upon, and an obstruction to the return circulation takes place, concomitant with congestion or inflammation, and where, even without any of these conditions, symptoms are produced which cannot be explained except by such displacement, that we are called upon for their rectification. Kiwisch, Simpson, and Velpeau indeed imagined, and fought for the theory that displacements under all circumstances ought to be corrected; but it is only exceptionally that we meet with a case where the displacement is not the result of some other trouble, though certainly it will aggravate this state, and usually will call for treatment.

As my ultimate purpose is to explain my pessary, let us omit displacements backward, upward, and laterally, and we find that exciting causes for prolapse and anteversion (with so much concomitant flexion as not to make this an extra factor requiring treatment) are:

1. *Increased weight of uterus.* a. Tumors, subinvolution of the organ, or inflammation in prolapse. b. Increased weight of fundus, subinvolution of placental site, or fibroids of the anterior wall in anteversion.

2. *Interference with uterine supports.* a. Rupture of the perineum, prolapse of the vagina, relaxed ligaments, or flabby abdominal walls in prolapse. b. Prolapse of anterior vaginal wall and cystocele, relaxation of the utero-vesical ligament, shortening of lower part of posterior ligaments, shortening of round ligament in anteversion.

3. *Pressure from above.* Tumors in the abdomen, tight lacing, violent efforts, ascites, may produce prolapse or anteversion; and, as described by Breisky, even the entrance of intestines into the otherwise patent Douglas' cul-de-sac may give rise to anteversion.

To recognize in each given case the cause of the displacement will be our first duty, the treatment will suggest itself.

A ruptured perineum ought to be united.

An inflamed or subinvolved uterus or vagina ought, by rest and hot water, etc., to be decreased in size ; false membranes ought to be stretched or ruptured ; fibroids in the uterus removed if possible ; tight clothing discarded ; tone given to an anæmic person or lax ligaments by outdoor exercise and administration of iron and nourishment. Lax or obese abdominal walls are to be kept in place by a bandage, thereby distributing the pressure of the intestines equally over the pelvic roof. But in all these cases replacement of the organ and a well-adapted pessary, lifting the organ to its normal plane so as to relieve the pressure and stretching of blood-vessels, will always prove a valuable factor, with which I, for one, would not dispense. Of course, where abdominal tumors are the cause of the displacements, or where the uterus is so firmly glued down in its abnormal position that it is impossible to stretch the adhesions, these latter means will be of no avail.

The replacement will be always easiest performed in the knee-elbow position. The aid of gravity is thus brought into force. Elevating the perineum will admit the air into the vagina, which will rectify the cystocele, prolapse, or anteversion in many cases by itself.

Slight adhesions should be stretched, and the reposition completed by the finger, or a cotton ball held by a forceps. Whenever we cannot replace by these means, it is dangerous to use the sound or elevator, the application of which, even in the other cases, is always dangerous.

We now come to those means which we have to maintain a replaced anteversion or a cystocele with prolapse in position.

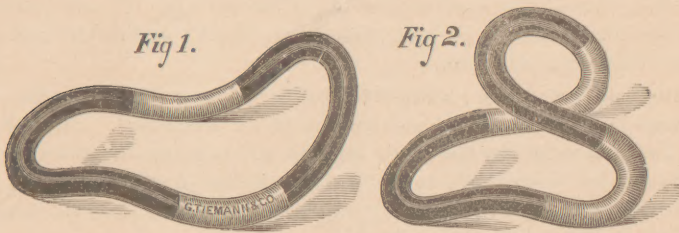
I do not wish to enumerate all those appliances which take their support from outside of the vagina, from an abdominal belt and perineal band. Nothing more unphysiological could be imagined ; excluding the disagreeable sensation of the band, each jar and every different posture reflects violence on the uterus, giving rise to constant irritation. The number, however, of vaginal anteversion, or prolapsed pessaries devised, and daily being devised, indicate that we have not yet found our *beau idéal*.

All such pessaries aim at the elevation of the vesico-vaginal septum, and thereby of the bladder and uterus, except rings, which stretch the sacro-uterine ligaments, and thus sling the uterus up from behind.

They take their support from either the posterior vaginal wall and perineum, or from the bony parts, the symphysis, or the planes of the ischium. Those taking their support from the soft parts, produce less irritation because they do not receive so much counter-pressure, and they allow more latitude to the instrument and uterus ; besides, the smaller the pessary, the less irritation it will produce, and the more chance will the relaxed tissues have of regaining their tonicity. Therefore, all those rings, elastic or inelastic, and those appliances which act merely by their bulk, and which, to maintain their efficacy, have to be constantly increased in size performing their work by stretching the whole vagina, ought to be rejected.

Thomas', Pallen's, and Graily Hewitt's pessaries are excellent for some cases ; but one of the grave objections to them is, that they cannot ordinarily be removed and reintroduced by the patient herself, a defect also of that otherwise most excellent pessary of Gehrung's.

This pessary—the double horseshoe—lies, in his diagrams at least, with the lower bow below the pubic arch, while the other one supports the vesico-vaginal septum. In reality both bows work themselves behind the symphysis (a position illustrated by a diagram by Mundé) and stretch the base of the bladder, giving rise to vesical irritations or peri-uterine inflammation. To obviate these defects I have devised a pessary, a small size of which, while supporting the anteversion or cystocele completely, is easy of introduction and withdrawal, as it takes its support ordinarily from the soft parts, and is even applicable in cases where the perineum is ruptured, and cannot be operated on.



It has the form of a Smith's modification of Hodges' pessary. The upper and lower parts consist of hard rubber, and are joined on either side by a spring, coated with soft rubber. The pessary is broad for those cases where the perineum is partly wanting, while it is narrower where the latter is intact.

After the anteversion or prolapsus are replaced, the pessary is introduced like an ordinary Smith's, but the upper bar is left in front of the cervix, instead of being placed behind it, as in a retroversion. The weight and the tendency for the malposition to reoccur are neutralized by the springs, which will only give way to a certain extent ; while their elasticity makes it particularly adapted for such cases where tenderness would preclude the use of any other pessary.

In a case where the uterus is heavy the springs have to be strong ; where the organ is light and easily movable they have to be more yielding.

CASE I.—Mrs. W——, aged thirty ; married three years ; one full-term pregnancy two years ago, easy labor ; menstruated three months after confinement ; has always been well up to that time ; menstruation regular as to time and quantity. Complains of pains in back and left side, which are increased before menstruation, and upon exercise ; frequent

micturition, less when recumbent; constipated. Physical examination reveals a uterus which measures three and one-eighth inches, and is in a high degree anteverted; severing of the perineum proper, though skin surface intact.

Thomas' and Gehrung's pessaries produced only very transient relief, the former after a while produced irritation, a small size of the latter she lost in walking; wearing a larger size was attended with discomfort.

For this case I devised my pessary. The relief it gave her was immediate; she wore it for three months, and is now pregnant for the second time.

CASE II.—Mrs. B—, aged sixty-five; widow; mother of four children, the last of which was born twenty-six years ago after instrumental labor. Since that time patient has been troubled with dragging pain in pelvis. A few years ago a tumor appeared outside of the vulva, which she has carried since then by a diaper. This has incapacitated her for any exertion, though she is otherwise hearty for her age. Physical examination revealed complete prolapse, the uterus slightly anteverted, and a lax, partly lacerated, perineum.

Reduction was easy; a broad size of my pessary kept the uterus well in place (the patient would not consent to an operation). She has worn the instrument for the last three months without any discomfort; she is able to do her housework, and only in straining at stool does she stand in danger of losing it. By applying the tip of the finger to the lower arc she can easily obviate this difficulty.

CASE III.—Mrs. S—, aged thirty-two; married seven years, three children, the youngest of which is two years old, complains of menorrhagia, dragging pain, and frequent micturition. Physical examination showed enlarged anteverted uterus, deep unilaterally lacerated cervix, and slight perineal rent. The cervix was united by four sutures and healed promptly, leaving the uterus decreased in size, and the patient free from her accustomed flooding. The pain and anteversion were not modified. The uterus was now replaced, and one of my pessaries introduced. The relief was immediate; she did not return for ten weeks, and then she gave me the following history: Shortly after the introduction of my ring she had removed to Brooklyn; she had not felt any pain until after that event. Her idea was that the ring, which she had not until then removed, was out of place; she consequently withdrew the instrument and reintroduced it, at once alleviating her sufferings; but in a few hours, after straining, she felt the pains return. Being disinclined to come over to New York, she consulted two gentlemen in Brooklyn, both of whom tried various instruments, none of which did her any good. On examination I found her uterus heavier and lower down than before, and upon introducing my pessary [the same she had worn before] the uterus pressed it down instead of being supported by it. An instrument with stronger springs at once set matters right. For several months she has now felt perfectly well.

This strength of the spring must not be overlooked, because in another case I have, against my will, turned an anteversion into a retroversion, by a spring too strong for that individual case. Unfortunately this case has passed away from my observation, and I cannot tell how it terminated. In four more cases my pessary has given complete satisfaction to my patients and to myself, and I feel warranted in presenting it to the profession, only hoping that it will be given a fair trial. The instrument is manufactured for me by Messrs. George Tiemann & Co., of New York, who have managed to make the movable part of the pessary perfectly smooth and hard enough not to become imbued with secretions of the vagina.—*New York Med. Record*, Mar. 3d, 1883.

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